

## Appendix H

### **Response to Comments (April 21, 2014)**

#### **Pre-decisional Paint Creek Project EA**

Comments were received during the February 6 – March 7, 2014 Comment Period from Andrew Butler; Rick Bowers; Morgan Sommerville from Appalachian Trail Conservancy; Albert Ellis; Yolanda Saunooke from the Eastern Band of Cherokee Indians; Davis Mounger from Heartwood; Katherine Medlock from The Nature Conservancy; Candace Dinwiddie from Tennessee Forestry Association; Sam Evans and Sarah Francisco from Southern Environmental Law Center; Ben Prater from Wild South; Josh Kelly from Western North Carolina Alliance; Hugh Irwin from The Wilderness Society; and Catherine Murray from the Cherokee Forest Voices.

Page numbers in the Forest Service responses refer to the EA as posted to the website. Page numbering may vary slightly on EA versions viewed or printed from website.

The comments below are excerpted from the original letters, e-mails, and transcripts to represent the essence of the comment or concern. The complete text of the comments can be read in the originals in the project file.

#### ***--- Andrew Butler/Rick Bowers/Albert Ellison***

**Comment 1:** In favor of creating early successional habitat in the Paint Creek Project area.

**Response:** We appreciate your supportive comment for this project.

#### ***--- Candace Dinwiddie, Tennessee Forestry Association***

**Comment 2:** We believe Alternative D will create a healthier forest with more management activities, especially in white pine.

**Response:** We appreciate your supportive comment for this project.

#### ***--- Morgan Sommerville, ATC***

**Comment 3:** ...management activities should not take place in the A.T. prescription area and any activities visible in the middle-ground as viewed from the A.T. should meet a scenic integrity level of at least "moderate".

**Response:** Per the Cherokee National Forest Revised Land and Resource Management Plan (Forest Plan) regarding management within Prescription 4.A:

- “Low intensity vegetation management is appropriate to maintain long term goals and stewardship objectives of the [Appalachian Trail] prescription area.” (Forest Plan, p. 95)

- “Activities are planned and carried out in cooperation with the appropriate [Appalachian Trail] management partner(s).” (Forest Plan, p. 95)

Stands proposed for treatment located within Prescription 4.A will be evaluated on a case by case basis to ensure compliance with Forest Plan direction for the prescription. Stands proposed for treatment outside of the 4.A prescription are currently assigned a Scenic Integrity Objective (SIO) of “Moderate” or would not be visible from the A.T.

***--- Yolanda Saunooke, Eastern Band of Cherokee Indians***

**Comment 4:** ...the EBCI THPO believes that the proposed project may proceed when an Alternative...is decided. In the event that project plans change, or cultural resources or human remains are discovered, all work should cease, and this office should be contacted...

**Response:** All known and newly-discovered cultural resources, including but not limited to those important to the Cherokee people, would be protected in the Paint Creek Project area per Design Criteria #16 (EA, p. 44):

16. Any cultural resource sites found during implementation of the project would be reported immediately to a Forest Service Archaeologist and work will stop in the area.

***--- Katherine Medlock, The Nature Conservancy***

**Comment 5a:** We feel that the restoration work being done on the North Zone of the CNF is a national model for collaboration as well as a regional model for how restoration should be achieved in the Southern Blue Ridge.

**Response:** We appreciate your supportive comments for this project.

**5b:** While there is limited mention of monitoring within the EA itself, we also appreciate the Forest Service’s willingness to do some additional monitoring within the Paint Creek watershed to help answer questions about the effects of prescribed fire. While we know that these questions are regional in nature and will not be answered solely by work in Paint Creek, we appreciate the effort to contribute to the greater understanding of prescribed fire effects in the Southern Blue Ridge.

**Response:** The Paint Creek Project’s monitoring plan, still being developed, will include installing additional Bates plots (10-15 1/10<sup>th</sup>-acre plots per unit) within two prescribed burn units to evaluate fire impacts. Data will be gathered pre-burn, immediately post-burn, then one year, three years, five years and, if possible, ten years after the burn. The data will be used in an FFI model to determine changes in canopy cover, snag creation, age class, etc within the burn units over time. In addition, satellite imagery may also be acquired to determine burn severity. Other monitoring techniques have been discussed to

evaluate the Paint Creek project's restoration actions, but the Forest Service and potential partners currently lack the resources (funding and personnel) to implement the techniques. The Forest Service would cooperate with any partners that could provide needed resources.

--- *Davis Mounger*

**Comment 6: Effects to Compartment 214 Stand 15**

**6a:** Stand 214-15 should be left alone ... the stand has table mountain pine and snag habitat that is performing important biodiversity and habitat functions.

**Response:** Standard marking guidelines during pre-sale preparation call for Pitch, Shortleaf and Table Mountain pine and older-aged oaks to be left unmarked to be part of the residual stand, if possible. Snags would not be marked or felled during sale preparation or logging operations unless they pose a threat to life and/or property.

After further field review the proposed treatment for stand 214-15 for all action alternatives will be changed from a Shelterwood to a Midstory treatment followed by a prescribed burn. This decision was made due to the small amount of operable ground within the stand versus the economics of commercially treating this portion of the stand. The Midstory treatment will target red maple, white pine and other species encroaching under the upland oak - yellow pine forest type.

**6b:** We must restate our request for better communication with the public, as our request for clarifying information on this project (from initial scoping) received no response.

**Response:** Thank you for your comment. A concerted effort will be made to be more responsive and timely to public requests for project information.

**6c:** ...the EA should contain the ages of the stands scheduled for crop tree release and thinning.

**Response:** The table below shows the ages of all stands (base year 2013) proposed for thinning, including group selection with thinning. The stands for crop tree release are not included in the table due to the high number of stands proposed (674 acres in 32 stands; see EA, p. 22); however, all of the stands are  $\leq 20$  years old.

Compartment	Stand	Age	Compartment	Stand	Age
209	1	33	214	13	112
209	3	88	214	20	85
209	4	36	215	22	100
209	6	106	215	28	83
209	7	88	215	47	113

Compartment	Stand	Age	Compartment	Stand	Age
209	19	106	215	53	83
209	34	128	262	14	95
209	35	20	262	30	99
209	38	128	264	8	93
209	39	91	264	22	118

### **Comment 7: Logging for Early Seral**

**7a:** ...this project proposes logging stands that are 90-110 years of age for logging for Early Successional Habitat. With little old growth or near old-growth stands, it would be better to allow these stands to continue to mature. The stands that we have seen have no need of treatment...

**Response:** According to GIS data, there is no existing Old Growth currently designated or documented in the Paint Creek project area. Under Alternative A, the No Action Alternative, the proposed treatments would not be implemented within the project area. Choosing this alternative would allow the stands proposed to be treated (via commercial and noncommercial timber harvest) in the three action alternatives to continue to mature and, in the absence of major disturbance, develop the characteristics considered necessary for Old Growth status.

**7b:** There are quite a few feed plots in this analysis area that perform some functions of early seral habitat, although they lack the biodiversity that is normally associated with open habitat in a forest setting...We would like to suggest that if these feed plots are to be maintained that this district consider using some of them as sites to promote native forbs and grasses that are site appropriate.

**Response:** We are in the process of converting many of the existing wildlife openings to more native grasses and forbs. The process of removing the existing vegetation and establishing native grasses and forbs, however, can take several years. We expect to see changes in the composition of these openings as this project moves forward.

**7c:** We hope that the district will focus on stands that are developing old growth structure and functions and maintain a conservationist approach to them...If logging is to occur in the stands listed for early successional habitat, we request that the Forest Service make a note of any small communities that provide added biodiversity and not log them.

**Response:** Rare communities and locations of federally-listed Threatened and Endangered species will be protected, where present, within stands proposed for early-successional forest creation, per Forest Plan direction. Leave areas for Forest Service-listed Sensitive species will be established, where needed, to reduce potential adverse impacts. Per Design Criteria #5 (EA, page 45, and see below), newly-discovered

Threatened, Endangered and Sensitive species occurrences would be documented and the locations evaluated to determine if adjustments to the sale area were needed.

5. Any new threatened, endangered, and/or sensitive species locations discovered within a project area may result in all actions being delayed or interrupted within the area. The appropriate district wildlife/fisheries biologist or botanist would be consulted to determine effects of the action on the species.

**7d:** We are glad that the district has made note of the Maple Leaf Alumroot populations in six of the areas that are scheduled for logging and have at least made modifications to their analysis. We hope that if logging does occur in these stands that biologists make at least a cursory second visit before logging occurs to look for any other populations that may require adjustment of the sale area.

**Response:** Any new occurrences of Maple Leaf Alumroot, a Sensitive Species, or other Sensitive Species associated with future visits would be documented in the Threatened, Endangered, and Sensitive species database. Since the new occurrences would be new information, the locations would be evaluated to determine if adjustments to the sale area were needed. See Design Criteria #5 above.

#### **Comment 8: Thinning/Midstory**

We are concerned about the repeated herbicide treatments of Imazapyr and Glyphosate that are planned for Pre- and Post- harvest ... Multiple herbiciding treatments and cuts stand to make real ecological effects on the landscape.

**Response:** Herbicides are another management tool used to move stands toward the desired condition. Each stand is evaluated and all options considered, including mechanical means and/or prescribed burning, before herbicides are applied. The herbicide treatments proposed are selective with only the tree chosen for treatment being injected with an herbicide. Broadcast spraying is not proposed for native vegetation.

The herbicides used for vegetation management (Glyphosate, Imazapyr and Triclopyr) have been well-studied. While each can have negative effects when used improperly, the herbicides have been shown to have negligible effects on soils, water resources, wildlife, etc when applied correctly at the recommended concentrations. See Appendix C – Herbicide Use Assumptions. Implementing Forestwide Standards and Guidelines for herbicide use (Forest Plan, pages 47-50) would further reduce the potential for adversely impacting the environment.

The effects of the proposed use of herbicides have been analyzed in the Paint Creek EA by resource: Soils, pages 50-51, 54-55, 56; Water Resources, pages 61-62, 64, 65-66; Forest Resources, page 74; Health and Safety, pages 83-86; Biological Resources, pages 88, 97, 104, 114, 131-133, 136, 137-138; Scenery Resources, pages 144, 146, 148; Recreation Resources, pages 151, 153, 154; and Climate Change, page 156.

### **Comment 9: Improve Wildlife Habitat**

We approve of work to improve wildlife habitat [such as nest boxes, etc] ... We suggest that many of these goals can be aided greatly by maintaining later seral age class trees, snags, and coarse woody debris.

**Response:** We agree that maintaining late seral age classes provides important habitat components for wildlife. This is also true of the early and mid seral classes as well. Implementing Forest Plan direction, via the Paint Creek Project, would create a mix of seral stages across the landscape, resulting in a forest that provides a diversity of habitats for a wide array of species.

### **Comment 10: Roads**

**10a:** If the unauthorized roads [to be added to the system were obliterated and revegetated], there would be no future need for [grading] and other maintenance. Adding roads to the system perpetuates problems beyond that of the life of the project. These problems are well-known and have an extensive literature: lack of budget for road maintenance and for law enforcement; soil and hydrology problems; vectors for NNIS; forest fragmentation.

**Response:** While not adding the unauthorized roads to the system would reduce road maintenance and other road-associated costs, the roads in question currently exist on the ground, and were identified in the Paint Creek Travel Analysis Report as being needed for resource management. These needs would continue into the future. In addition, the majority of these roads were constructed during the 1970's but were not added to the road system at that time. The Paint Creek project would correct that omission.

Impacts from roads are analyzed in the EA by resource: Soil and Water, pages 49-50, 54, 55-56, 60, 63-64, 65; Forest Resources, pages 73, 77, 80-81; Biological Resources, pages 89 to 132 (see individual species analyses); Scenery, 139, 143, 144-145, 146-147, 148-149; and Recreation, pages 150, 152, 153, and 154.

**10b:** We are concerned that some of the roads in this analysis area are under stress... Downgrading some secondary roads such as [422-A] to trails or even decommissioning would relieve such ecological and budgetary stress. At minimum, the uninventoried spur roads that extend well past the terminus of these secondary roads need to come under control, and if possible, be revegetated.

**Response:** The Forest Service shares Mr. Mounger's concerns regarding potential soil and hydrology issues associated with the condition of some of the roads in the project area, including Forest Service Road 422A. In October 2013, after the photos included in your comment letter were taken (photos on page 7 of Mounger letter dated 2/28/2014), the district performed deferred maintenance on FSRs 422 and 422A to bring their conditions up to standard and to rehabilitate/block access to illegal spur roads (see 2013

CMLG project summary and photos below). Please note that at the time the photos below were taken grading work had been completed but aggregate had not yet been placed.

**2013 CMLG Project in the Paint Creek Watershed:** The project consisted of improving soil and water quality in the Paint Creek watershed by performing maintenance and repairs to Forest Service Road #422 and #422A to reduce erosion and sedimentation. A contract was issued to perform maintenance on a total of six miles of road, primarily to improve drainage and reduce sedimentation. Four unauthorized routes (approximately one mile) were decommissioned.



Before: Unauthorized roads and lack of drainage causing sedimentation



After: Illegal access blocked and road sloped for drainage, reducing sedimentation

Additionally, the Paint Creek EA (see Table 2aa, p. 45) proposes to decommission 3.7 miles (Alternative B), 4.7 miles (Alternative C) and 4.7 miles (Alternative D) of authorized and unauthorized roads in the Paint Creek Watershed. Descriptions of the road decommissioning work and its potential effects on soil and water resources can be found in the EA on pages 49, 53, 54-55, 59, 62, and 64.

#### **Comment 11: Soil effects**

We are particularly concerned about effects of early seral logging and associated logging/road construction effects on...sensitive soil types [such as the] Junaluska soil associations ...We are concerned about the ability...to successfully mitigate the effects of high-volume logging and mechanical equipment. This project should not go forward until it at least both modifies the volume of logging in these areas and clearly details how it will mitigate for logging-related effects beyond simply arguing for Best Management Practices.

**Response:** The photo Mr. Mounger presents of “*Logging on Junaluska Soils*” (photo on page 8 of Mounger letter dated 2/28/2014) appears to be a skid road from the Island Creek Timber Sale, which is associated with the Hogback EA on the CNF’s Tellico Ranger District. Effects of skid trails on soils can be found in the Paint Creek EA on pages 48, 52, and 54. It should be noted that a Best Management Practices (BMP) inspection conducted in February of 2013, on a unit with Junaluska soils in the Island Creek Sale corroborates the following effects disclosed in the Paint Creek EA:

1. Localized soil displacement and compaction would occur along skid roads and in log landings.
2. BMPs and streamside filter zones would prevent sediment in excess of background levels from reaching streams adjacent to the harvest unit.

It should also be noted that per Forest-wide Goal 8 (Forest Plan, page 24), it is not mandatory that all soil disturbance be prevented. Rather, FW-8 states that “[d]uring mechanical disturbance on all soils dedicated to growing forest vegetation, the organic layers, topsoil and root mat will be left in place over 85 percent of a project area”. Per the soils analysis for Alternative B (EA, page 48): ‘Based on the acres of proposed commercial harvest, soil compaction and topsoil displacement may affect approximately 3.1% of the NFS land in the Paint Creek Watershed (502 acres [of commercial harvest]/16,136 acres of NFS lands).’ This percentage would be reduced slightly under Alternative C (3.0%: 485/16,136) and increase under Alternative D (3.9%: 623/16136). Regardless of alternative implemented, all alternatives would meet the FW-8 criterion.

#### **Comment 12: Burning**

**12a:** We request that the district carefully examine its proposal for 1,955 acres of burning. The proposal states that individual burn blocks may be reburned on a two to ten-year rotation. The possibility of such a frequent fire regime is excessive.



**Response:** The Forest-wide Goal 21 (Forest Plan, page 44) states (in part), ‘Use fire during dormant and growing seasons to achieve ecological sustainability, rehabilitation, and restoration of fire dependent and associated communities.’ The objective is to conduct prescribed burns so as to maintain a fire return interval of 4-12 years. In the Paint Creek Watershed prescribed fire would normally occur within this interval, although probably closer to the 10-12 year rotation. In recently harvested stands, however, species, such as red maple and tulip poplar (both prolific sprouters) can out-compete the desired regenerating species, such as pines, oaks, and other hardwoods, post-harvest for space, light, nutrients, etc. The use of prescribed fire is an effective and cost-efficient means to initially control these aggressive species, thus allowing the desired species to be successful. Each prescribed burn is evaluated post-burn to determine if the burn objectives (including red maple and tulip poplar suppression) were met; if not, an additional burn or burns are planned. Once the objectives were achieved, the unit may not be burned for a decade or longer, depending on resource needs (e.g. fuels reduction burn after a large-scale insect outbreak, such as southern pine beetle, or a high wind event).

**12b:** We are concerned that the high budget allocations given to fire management in the agency encourages a fire emphasis that is beyond a natural occurrence and can even be detrimental to forest health.

**Response:** Allocation of the fire management budget is beyond the scope of the proposed project, and is irrelevant to the decision to be made.

**12c:** We are concerned of the potential for a frequent fire regime to have negative effects that include: loss of humus layer; reduced water absorption; loss of soil and water quality, nutrients, [and] micro- and macro-invertebrates; 'exercizing' of the forest...changing [its] basic ecological character.

**Response:** Potential effects of prescribed fire on the humus layer, soil erosion, micro- and macro-invertebrates are disclosed in the EA on pages 50, 54, and 55. Potential effects of prescribed fire on water quality are disclosed in the EA on pages 61, 63, and 65.

With respect to Mr. Mounger’s concern regarding reduced water absorption: No cases of hydrophobicity associated with prescribed fire have been documented in the Eastern United States (Lafayette et. al. 2012), consequently impacts of prescribed burning on the ability of soils to absorb water are not of concern for this project.

The prescribed burns proposed in Alternatives B, C, and D, would generally be of low duration and low intensity. In general, single, dormant season prescribed burns have negligible to no adverse effects on either soil organic matter pools (highest concentrations are typically present in the forest floor humus layer), soil microbial activity or prospects for longer-term restoration (Boerner et al. 2008, 2009). In studies where low to moderate intensity prescribed burns were conducted, the results indicated little to no loss of the forest floor humus layer (Vose et al. 1999, Hubbard et al. 2004, Knoepp et al. 2009).

Elliott et al. (2012), however, found that 18% - 39% of the forest floor humus layer was consumed after high-intensity fell-and-burn treatments in pine-hardwood stands.

Even with the most severe burn treatment (cut-and-burn) in pine-hardwoods no loss in soil carbon (C) or soil nitrogen (N) was detected (Knoepp et al. 2004). Across 12 sites of the Fire and Fire Surrogate Study, Boerner et al. (2009) reports no significant reductions in soil carbon or nitrogen pools following fire, thinning, or fire + thinning treatments. Based on a meta-analysis of 57 studies, Nave et al. (2011) found that when considered across all regions, prescribed burning did not reduce mineral soil carbon and nitrogen storage at the burn sites. Low intensity burning in pine-hardwood stands reduced understory biomass, as well as the carbon and nitrogen pools in coarse woody debris, small wood and litter; however, there was no significant loss of carbon and nitrogen from the humus and soil layers. Nave et al. (2011, page 19) states that “[t]he role of fire type in mediating C and N shifts (especially in the forest floor) indicates that averting wildfires through prescribed burning is desirable from a soils perspective.”

**12d:** We request that the Forest Service identify the more mesophytic stands within the scheduled burn areas. If burning is to occur, those areas should not be burned.

**Response:** Fire is not intentionally put in areas that normally won’t burn, such as in mesic forest types/communities. Where fire backs into a mesic area, it either goes out naturally, or is at such a low intensity that it usually burns only the top layer of litter.

**12e:** The Forest Service also needs to evaluate in the EA the effects of burning during different seasons on herbaceous vegetation, differential effects on woody species selection, and invasive species proliferation.

**Response:** The Forest conducts primarily dormant season burns; however, burns can and are conducted during other seasons, depending on resource needs. Low intensity, dormant season burns, as proposed in the Paint Creek EA, cause limited effects to herbaceous vegetation and mature trees. Impacts from prescribed burning on Forest Sensitive and Forest Viability plant species, known or expected to occur within the burn areas, can be found in the EA on pages 115–125 and 127-128. Effects of prescribed burning on woody plants can be found in the EA on pages 73-74.

Efforts to control Non-Native Invasive Species (NNIS) in the proposed burn areas will be made if, and where, an increase in NNIS populations occurs. NNIS are analyzed in the EA on pages 135 to 138.

**12f:** Logging and burning of areas where stands are reaching ages where [Coarse Woody Debris] is forming ... sterilizes the forest and disrupts the myriad processes and cycles...that a recovering forest is gradually developing. Allowing natural processes to be the primary driver of forest health is advisable from an ecological and budgetary standpoint.

**Response:** See responses to Comments 7a, 7c, 9, 11, 12a, 12c, 12d, and 12e. Chapter 3 of the EA (pages 46 to 162) provides the direct, indirect and cumulative environmental consequences of the actions associated with Alternatives A-D.

**---Josh Kelly, WNCA; Catherine Murray, CFV; Hugh Irwin, TWS**

**Comment 13:** We...appreciate the additional alternatives analyzed in the EA because they provide a wide breadth of potential outcomes for the project including the much needed work at Devil's Kitchen Branch.

**Response:** We appreciate your supportive comments for this project.

**Comment 14a:** ...we [prefer] a *Modified Alternative C* that adds the crop tree release treatments from Alternative D and the approval for the Paint Mountain prescribed fire in Alternative B to the other activities of Alternative C.

**Response:** We will consider your request for the recommended additions to Alternative C, if the alternative is chosen to be implemented.

**14b:** Whichever alternative is chosen it should include the white pine plantation in the Devils [K]itchen area.

**Response:** Since Alternatives C and D currently propose treating the white pine plantation in the Devils Kitchen area, we will consider adding the treatment to Alternative B, if the alternative is chosen to be implemented.

**Comment 15:** [Stand] 218-10 ... is approaching old-growth status and the western side of the stand, the chestnut oak dominated portion, appears to be existing old-growth ... We request that, whatever alternative is chosen, this stand be removed from the project. In particular, removing the chestnut oak dominated portion of the stand, in writing, from any decision is essential to avoid our outright opposition to the project.

**Response:** Based on field data, Stand 218-10 does not meet Criteria 1 (age) and Criteria 2 (disturbance) for old growth status, per Region 8's *Guidance for Conserving and Restoring Old Growth Forest Communities on National Forests in the Southern Region* (pages 23-25). The stand can therefore be included for early successional habitat creation, as directed in the Forest Plan for prescription area 8.C (EA, page 14).

**Comment 16:** There are many stands which were recommended for treatment by the CNFLRI group that were enlarged in the Forest Service proposal. The boundaries of these stands were chosen by...CNFLRI...for specific reasons, usually to conform to areas that would benefit from silvicultural restoration. To the extent that these stands have been enlarged in the Forest Service proposal, these enlargements often obscure the original

restoration intent of the CNFLRI recommendations by including areas that are not in need of the treatments proposed.

**Response:** All comments, including CNFLRI's recommendations, were taken into consideration throughout the planning process. The three action alternatives respond to the purpose and need, described on pages 14 to 16 of the EA, and are consistent with the CNFLRI's recommendations to the Forest Service. In all alternatives (except the No Action Alternative), entire stands, based on the stand exams and professional judgment, may be selected for treatment to meet Forest Plan direction.

**Comment 17:** Stand 217-31 has degraded oak forest with abundant white pine in the lower portion as [shown] in Alternative C, and 110 year-old Rich Cove Forest and Mesic Oak Forest in the portion shown in Alternative D. This portion...exhibits excellent canopy tree and herbaceous diversity and has no need for restoration. We request that the Alternative C boundary be used for this stand in whatever decision is reached.

**Response:** Stand 217-31 is proposed for shelterwood treatment to help meet the Forest Plan objective for early-successional forest (ESF) within the 8.C prescription (Forest Plan, p. 142). Various factors associated with the stand such as white pine encroachment, age class, stand health, etc., as well as providing ESF, were considered during project development. Based on this assessment, the entire stand was selected for treatment in Alternatives B and D. Alternative C was designed, in part, to meet the following public issue identified during scoping: "...drop or modify the regeneration harvest in the characteristic, mature forest on a portion of Compartment 217, Stand 31." We will consider your request, if Alternative C is not chosen to be implemented.

**Comment 18:** The LRI committee's boundary for stand 217-36 was drawn on the west side of Rough Branch to capture an area of uncharacteristic white pine dominance. In Alternative D, the stand crosses Rough Branch to include an area with characteristic hardwood dominated Cove Forest. Including the...characteristic hardwood, which has no need for restoration, with the degraded area dominated by white pine...obscures the restoration intent of the treatment. We request that the Alternative C boundary for 217-36 be used in whatever decision is signed.

**Response:** See responses to Comments 16 and 17. We will consider your request, if Alternative C is not chosen to be implemented

**Comment 19:** Stand 216-2 was originally identified...for oak woodland creation by the LRI team. The team changed our recommendation to regeneration to address a deficit of young forest habitat. Because the other alternatives provide [sufficient] young forest habitat, if Alternative C is not chosen, we request that the treatment for this area be changed to gap harvest and thinning so that both young forest and oak woodland habitat can be created. We would also like to emphasize that the combination of fire and harvest is required to prevent white pine from replacing oaks in this area. We noted dense white

pine regeneration in the seedling layer, and without periodic fire, we are concerned that the removal of portions of the canopy will only favor white pine.

**Response:** Stand 216-2 falls within the Bellcow Mountain prescribed burn block which was burned in April 2014. The request to alter the treatment prescription for stand 216-2 will be considered, if Alternative C is not chosen to be implemented.

**Comment 20:** [The LRI recommended boundary for] stand 216-25...conforms to an area of white pine dominance associated with an old field. The Alternative D boundary for the stand is larger and includes areas of more characteristic hardwood dominance. The Alternative D boundary also extends into MA 4A, the Appalachian Trail Corridor. Under the [CNF] Forest Plan, MA 4.A is unsuitable for timber management and vegetation management is only permitted for certain limited purposes, which don't seem present here. We believe the Forest Plan would not support commercial logging in MA 4.A, especially without a restoration objective.

**Response:** Portions of the stand that can be seen from within ½ mile of the Appalachian Trail will be dropped from treatment. Also see responses to Comments 3, 16 and 17.

**Comment 21:** The final stand with a combination of concerns and overlap is 210-15 on Ricker Mountain. The boundary for this stand in Alternative D includes extremely steep and rocky terrain that should not be logged due to erosion concerns. Additionally, site visits...found large, old, and fire resistant pitch pines and white oaks on these steep slopes that should not be cut. These should be the leave trees in this area. While the Forest Service has proposed this area for a shelterwood harvest, the CNFLRI proposal was for woodland creation and we still support that proposal. Whichever decision is chosen, steep, rocky slopes near the summit of Ricker Mountain and areas with old-growth characteristics should be excluded from the area logged.

**Response:** Stand 210-15 is not proposed to be treated. Communication with the commenter clarified that the stand in question is actually 214-15 (J. Stelick, Vegetation Management Program Manager, pers. comm. 2014).

Standard marking guidelines during pre-sale preparation call for Pitch, Shortleaf and Table Mountain pine and older-aged oaks to be left unmarked to be part of the residual stand, if possible. Snags would not be marked or felled during sale preparation or logging operations unless they pose a threat to life and/or property.

After further field review the proposed treatment for stand 214-15 for all action alternatives will be changed from a Shelterwood to a Midstory treatment followed by a prescribed burn. This decision was made due to the small amount of operable ground within the stand versus the economics of treating this portion commercially. The Midstory treatment will target red maple, white pine and other species encroaching under the upland oak - yellow pine forest type.

**Comment 22:** We are disappointed with the lack of detail addressing monitoring in the Draft EA ... the final EA should address the restoration goals for each stand or condition treated, which would form the basis for the monitoring plan, and start to put specifics to the monitoring plan as well, so that the key elements of the monitoring plan are included and committed to in the environmental analysis and decision documents.

**Response:** Forest Plan Standards for monitoring (stand exams, regeneration checks, etc.) would be met for this project. The Paint Creek Project's monitoring plan, still being developed, will include installing additional Bates plots (10-15 1/10<sup>th</sup>-acre plots per unit) within two prescribed burn units to evaluate fire impacts. Data will be gathered pre-burn, immediately post-burn, then one year, three years, five years and, if possible, ten years after the burn. The data will be used in an FFI model to determine changes in canopy cover, snag creation, age class, etc within the burn units over time. In addition, satellite imagery may also be acquired to determine burn severity. Other monitoring techniques to evaluate the project's restoration actions have been discussed, but the Forest Service and potential partners currently lack the resources (funding and personnel) to implement the techniques. The Forest Service would cooperate with any partners that could provide needed resources.

***---Sam Evans and Sarah Francisco, SELC; Ben Prater, Wild South***

**Comment 23:** We support the Forest's decision to consider the LRI Committee's work as part of the best available science...

**Response:** We appreciate your supportive comments for this project.

**Comment 24:** We agree with the Forest Service that "there is a need to move these stands/systems toward plant communities predicted as most likely to occur based on the ecological potential of the site."

**Response:** Thank you for your comment.

**Comment 25:** ...we generally support the locations selected for treatment in Alternative C ... however, the EA does not clearly describe the restoration needs at these locations or explain how the proposed treatments will be restorative.

**Response:** Thank you for your comment. The EA describes the need for restoration actions on pages 14 to 16. The purpose and need associates forest plan management prescriptions with the need for change.

**Comment 26:** Alternatives B and D include areas not identified as needing restoration, and the EA does not justify a decision to implement any type of restoration management for these larger areas.

**Response:** Alternative B, the proposed action, is designed to move the Paint Creek project area from the current condition toward the desired condition, as described in the Forest Plan (EA, page 20). It responds to the purpose and need as described on pages 14-16 of the EA, and is consistent with the stakeholders' recommendations to the Forest Service for ecological restoration. Alternative C, a modification of the Proposed Action, was designed to meet the following public issues identified during scoping (see EA, Appendix B-Scoping):

- Develop an alternative dedicated to ecological restoration;
- Restore the white pine plantations at Devil's Kitchen Branch Bog back to natural forest;
- Drop or modify treatments in Compartment 214, Stand 15, Compartment 217, Stand 31 and Compartment 218, Stand 10;
- Exclude areas of steep slopes, rock outcrops, and old-growth pitch pines and oaks from the boundaries to be treated at Ricker Mountain;
- Restore Cutshall bog to a more natural condition by removal or relocation of the road through the bog.

Alternative D was designed to address internal issues (forest health and wetland restoration) identified by Forest Service staff not advanced during the initial development of the Proposed Action. Table 2aa (EA, pp. 44-45) compares the proposed treatment acres and miles associated with all alternatives. All action alternatives meet the purpose and need for action and the environmental consequences in the EA (pages 46 through 162) describes how each alternative moves towards the Forest Plan's desired conditions. The alternative development process was consistent with the direction found in the Agency's procedures for implementing NEPA at 36 CFR 220.

**Comment 27:** ...the EA does not provide any analysis to compare the action alternatives' effectiveness in meeting the project's restoration goals.

**Response:** Chapter 3 of the EA (pages 46 to 162) provides the direct, indirect and cumulative environmental consequences of the actions associated with Alternatives A-D.

**Comment 28:** We agree that the "purpose and need" for this project is appropriate based on the direction in the Forest Plan. As we explained in prior comments, the Forest Service was obligated to explain that ecological restoration was one of this project's driving purposes.

**Response:** Thank you for your comment.

**Comment 29:** Second, we do not object to the range of alternatives chosen for the EA, because we realize that the decision can blend elements from all four alternatives (including the "no action" alternative) based on their ability to meet the project's purpose and their environmental effects.

**Response:** Thank you for your comment.

**Comment 30:** The EA falls short, however, at the third step—analysis of impacts ... Without an explanation of the agency’s reasoning, the public cannot effectively participate in the decision, and the agency has no basis for choosing one alternative over another:

A conclusory statement unsupported by empirical or experimental data, scientific authorities, or explanatory information of any kind not only fails to crystallize issues, but affords no basis for comparison of the problems involved with the proposed project and the difficulties involved in the alternatives.

...the Paint Creek EA does not provide “explanatory information of any kind” to make a site-specific comparison of the restoration benefits of the alternatives or to conclude that any alternatives will better fulfill the project’s purpose to “move [atypical] stands/systems towards plant communities predicted as most likely to occur based on the ecological potential of the site.”

**Response:** Table 2aa (EA, pp. 44-45) compares the proposed treatment acres and miles associated with all alternatives. Chapter 3 of the EA (pages 46 through 162) provides the direct, indirect and cumulative environmental consequences of the actions associated with Alternatives A-D.

**Comment 31:** The EA does not distinguish between restoration needs at different sites, but lumps all the sites together to claim that all silvicultural treatments would: [B]egin the long-term process of: 1) restoring sites dominated by an uncharacteristic oak system, including sites with an overabundance of immature yellow poplar, to the expected shortleaf pine or mixed pine-oak system, 2) restoring pine-dominated sites, especially white pine-dominated sites, to the sites’ expected oak, mixed oak-pine or cove-hardwood system, and/or 3) modifying the existing successional class (S-class) to increase the sites’ structural diversity. EA at 71.

**Response:** Thank you for your comment.

**Comment 32:** The EA does not explain how fire would work at each site to suppress uncharacteristic vegetation or stimulate characteristic vegetation or how fire would be integrated with silvicultural treatments to accomplish specific restoration objectives.

**Response:** It is impossible to “explain how fire would work at each site” due to the changeable nature of prescribed fire: Fuel moisture, wind speed and direction, relative humidity, etc can and do change within the burn area during implementation of a prescribed burn. As such, the same burn on a different day may have different outcomes. Fire can, however, be described in broader patterns, such as a low-intensity burn typically results a mosaic pattern of burned/unburned areas, fire is effective at controlling white pine seedlings ( $\leq 2$  inches DBH), fire stimulates the growth of grasses and herbaceous



vegetation, etc. In those regards, the EA states that, “The proposed prescribed burns would help restore/enhance fire-conditional ecosystems by stimulating the existing characteristic vegetation and by supporting restoration of sites where uncharacteristic vegetation exists within each burn block. Although not as site specific as the vegetation management treatments listed above, the burns would advance the development of yellow pine (shortleaf, pitch, Table Mountain) and mixed yellow pine-oak systems by creating conditions suitable for desired pine seedling establishment and expansion. The burns would also facilitate the development of oak, mixed oak-pine or cove-hardwood systems by reducing pine, primarily white pine, seedling and sapling abundance” (EA, page 71).

Regarding the integration of fire and timber harvest: The prescribed burns will be integrated, where possible, with the timing of silvicultural treatments to achieve the desired goals and objectives for the Paint Creek project area, as expressed in the Forest Plan.

**Comment 33:** The EA should be supplemented to explain, for each site, whether and how the alternative treatments will further...restoration goals. This supplement should be made available for public comment. Without additional explanation of the goals and treatments *for each particular site or condition*, the EA cannot support a reasoned choice between alternatives, nor can it support a finding of no significant impact with respect to the action alternatives.

**Response:** Thank you for your comment.

**Comment 34:** ...if a project is intended to meet both restoration and ESH [Early-Successional Habitat] goals, restoration needs must be considered *before* ESH targets. Restoration activities will often create ESH, but creating ESH will not accomplish restoration unless it is located in a degraded ecosystem.

**Response:** Thank you for your comment.

**Comment 35:** ...restoration opportunities could easily provide enough acreage to meet ESH objectives ... It would...be a wasted opportunity to attempt controversial logging in mature, characteristic forest when so many constituencies agree that logging should be focused in areas with identified restoration needs.

**Response:** Thank you for your comment.

**Comment 36:** The EA asserts that the “creation of [ESH], as proposed in the Paint Creek Project, would have multiple primary and secondary benefits, including but not limited to restoring forest and wetland communities.” EA at 17. If the Forest Service intends to say that all ESH creation in Alternatives B, C, and D is restoration, then the proposition is false, and we cannot support “restoration” defined so broadly. If, on the other hand, the agency means to say that creating ESH in *some* degraded areas can *sometimes* assist the

restoration of the communities which ought to occur there, then we generally agree.

**Response:** The EA does not state that, “all ESH creation in Alternatives B, C, and D is restoration.” The statement was intended to convey that numerous primary and secondary benefits are associated with early-successional forest creation, one of which would be restoring forest and wetland communities. The entire statement reads:

“The creation of early successional forest (habitat), as proposed in the Paint Creek Project, would have multiple primary and secondary benefits, including but not limited to restoring forest and wetland communities; providing early successional forest habitat for wildlife, including federally listed species, sensitive species, “demand” species, etc, that utilize this habitat type; promoting habitat/age class/structural diversity within the project area to increase plant and animal species diversity and to enhance recreational opportunities (e.g. nature/wildlife/wildflower viewing, driving for pleasure, hunting, etc); creating waterholes to provide habitat for amphibians, crustaceans, and aquatic-dependent insects; treating/controlling non-native invasive species in the proposed treatment areas, improving habitat for native flora; improving Forest Service system roads, via pre-haul road maintenance, to reduce erosion and sedimentation; providing wood products for local needs; and providing jobs and payments to local and federal governments.” (EA, page 17.)

**Comment 37:** The template [of listing tables of ESH creation and other silvicultural activities] is unreasonably difficult to follow in the restoration context, and its limitations are apparent in this EA ... As the EA is currently organized, a reader must look at multiple tables and add together acreages to understand what is proposed for [the] stands. A much simpler, more usable format would show the location to be restored, describe the restoration need and proposed treatment for that location, and then state how much ESH would be created in the affected stands. Regardless of format, the EA must draw a clear distinction between sites selected for restoration and sites selected to advance other silvicultural or ESH goals.

**Response:** Thank you for your comment. We will take your recommendation into consideration for future projects/EAs.

**Comment 38:** A site is a candidate for restoration only when it is degraded—when its current condition is “atypical” or “uncharacteristic” as compared to its reference condition (the “plant communities predicted as most likely to occur based on the ecological potential *of the site*”) (emphasis added). Restoration treatments must be designed to move the site from the atypical condition toward that reference condition ... the EA makes no attempt to show that the proposed silvicultural treatments and prescribed fire will make any progress toward restoring reference conditions at any particular site, except perhaps the white pine-dominated site in the Devil’s Kitchen Branch area.

**Response:** Chapter 3 describes (EA, pages 46 through 162) how each alternative moves the project area towards the desired condition, per Forest Plan direction and as outlined in the purpose and need (EA, pages 14-16). Each resource section describes the direct, indirect and cumulative effects of the actions associated with Alternatives A-D.

**Comment 39:** The EA...mentions, in passing, the concept of structural “(S-class)” restoration. EA at 71. The EA does not, however, say which sites are in which conditions or how proposed treatments will affect those conditions.

**Response:** Thank you for your comment.

**Comment 40:** The Committee modeled nine community types, each with different disturbance regimes and natural range of variation. Each community type may be in any of several uncharacteristic conditions. As a result, there are many combinations of potential restoration needs. We realize that some conditions and needs are more common than others, but the EA should at least say which sites are in which category of need and how the alternatives would respond to those needs. Again, a breakdown of uncharacteristic vegetation restoration in each stand or site (or groups of stands/sites with similar conditions) could be provided in a table format.

**Response:** Thank you for your comment.

**Comment 41:** For example, the LRI Committee identified the Bellcow Mountain site (21 acres in Compartment 216, Stands 2 and 29), as having two distinct ecological systems, each with a different uncharacteristic condition. See LRI Paint Creek Recommendations at 24. In the dry and montane oak system, white pine (a mesic site species) is encroaching upslope. For this condition, the Committee recommended a mix of thinning and regeneration to remove white pine and open the canopy, followed by prescribed fire to maintain the open conditions and suppress white pine regeneration. In contrast, the Forest Service proposes to regenerate the entire area (those same 21 acres in Alternative C, and 53 acres in Alternatives B and D) without any follow-up prescribed fire. There is *no explanation whatsoever* [emphasis added by commenter] in the EA (1) of the current and reference conditions within Alternative C’s 21-acre site, much less the 53-acre site in Alternatives B and D, or (2) why a shelterwood without prescribed fire will be effective in “mov[ing] these stands/systems towards plant communities predicted as most likely to occur based on the ecological potential of the site.”

**Response:** See response to Comments 16 and 19. The Bellcow Mountain prescribed burn was conducted in April 2014.

**Comment 42:** The EA provides site-specific information for its other objectives, and we ask simply that restoration goals be analyzed similarly. For example, an EA could not possibly be considered adequate if it provided only the total acres of ESH without also

disclosing where those acres would be located and how they would be created. Similarly, the EA should say where and how specific restoration objectives will be met.

**Response:** Thank you for your comment.

**Comment 43:** We are...concerned that, without a clear explanation of the restoration need for a particular site, regeneration in mature, characteristic, forest will be incorrectly characterized as “restoration.” Each of the silvicultural treatments, including regeneration, is claimed as a legitimate means to accomplish...restoration. As we have explained before, however, regenerating mature, characteristic forest cannot be considered restoration. If such a stand lacks structural diversity, some structural treatments may assist the development of a heterogeneous structure (e.g., thinning), but regeneration only resets the clock on an even-aged stand. We cannot support that type of work as restoration. Unfortunately, the EA does not explain whether (or how much of) this sort of work is included in the Paint Creek project.

**Response:** Thank you for your comment.

**Comment 44:** ...the EA should...briefly explain why each treatment is expected to accomplish the restoration objectives and what factors, if any, might prevent its success.

**Response:** Chapter 3 of the EA (pages 46 through 162) provides the direct, indirect and cumulative environmental consequences of the actions associated with Alternatives A-D.

**Comment 45:** If several sites share the same current condition and reference condition, it may be appropriate to analyze them together; else, otherwise, they should be analyzed separately. If analyzed together, the analysis should at least disclose which sites are in which common condition.

**Response:** Thank you for your comment.

**Comment 46:** ...the EA must be supplemented with a description of current and reference conditions for each site (or type of site), a description of the proposed treatment for that site (or type), and a narrative explaining the reasons for choosing that treatment to move the site from its current condition toward its reference condition. Critically, if some stands (or portions of stands) have not been identified as being in a degraded condition or if the treatment is not intended to restore the stand, the EA should clearly distinguish those areas and state what goals (other than restoration) are being promoted.

**Response:** Chapter 2 of the EA (pages 20 through 45) describes the actions proposed for each of the alternatives, with Table 2aa (pages 44-45) providing a comparison of the proposed acres and miles associated with the alternatives. The EA describes the need for action in the purpose and need on pages 14 to 16.

**Comment 47:** ...the EA does not explain the need to integrate multiple treatments at a single site. As the agency surely understands, however, many sites cannot be restored to their characteristic communities with logging alone.

**Response:** Thank you for your comment.

**Comment 48:** The EA...does not explain where fire is needed to ensure that silvicultural treatments are effective.

**Response:** Thank you for your comment.

**Comment 49:** Stand 216-2 contains an oak forest with encroaching white pine and white pine regeneration. The Committee recommended thinning and following up with prescribed fire to suppress white pine regeneration. The EA, however, proposes a shelterwood cut without prescribed fire. We do not expect this silvicultural treatment alone to be successful.

**Response:** See response to Comments 16 and 19. Stand 216-2 lies within the Bellcow Mountain prescribed burn block, which was burned in April 2014.

**Comment 50:** ...we are concerned that the EA does not sufficiently disclose the cumulative effects (in this case, the beneficial effects) of other agency actions in the watershed. Four burn units are discussed in the EA, but none of them are in the Bellcow area, where Stand 216-2 is located. We are aware, however, that there is at least one other burn unit in which burning has recently been conducted and may be conducted again in the future. The EA should disclose and analyze the cumulative impact of the Bellcow burn unit (and any other burn units in the area) on the...restoration treatments.

**Response:** Chapter 3 of the EA (pages 46 through 162) provides the direct, indirect and cumulative effects of the actions associated with Alternatives A-D. Stand 216-2 lies within the Bellcow Mountain prescribed burn block, which was burned in April 2014.

**Comment 51:** Agencies must evaluate how their alternatives would meet project goals and compare their likely impacts. Here, the EA does not provide an accurate or effective way to compare the restorative potential of the action alternatives. We are skeptical of the EA's assertion that Alternative D "would restore more uncharacteristic acres" than Alternative C. EA at 81. Alternative C includes all the sites identified by the Committee as having restoration needs, and the EA does not support the assumption that the larger acreages affected by Alternative D are "atypical," uncharacteristic, or otherwise in need of restoration.

**Response:** Table 2aa (pages 44-45) provides a comparison of the proposed acres and miles associated with the alternatives. Chapter 3 of the EA (pages 46 through 162)

provides the direct, indirect and cumulative environmental consequences of the actions associated with Alternatives A-D.

**Comment 52:** ...the EA does not attempt to evaluate the different impacts or compare the likelihood of success of different treatments proposed for particular sites. The Devil's Kitchen Branch area, for instance, is the only site for which the EA discloses the specific restoration goal—removal and suppression of white pine and restoration of a mesic hardwood community. Two different treatments are proposed to address this need. Alternative C proposes a shelterwood and Alternative D proposes a group selection with thinning over a larger total area. Yet there is no analysis in the EA to explain why these differing treatments were proposed or which would better meet restoration goals.

**Response:** Both treatments proposed for the Devils Kitchen Branch Bog area, a rare community (Forest Plan, pages 342-343), are designed to move the stands from their current condition (white pine plantation) to the mesic hardwood forest expected for the area. EA pages 28-29. Effects of the project's proposed activities on the Devils Kitchen Branch Bog rare community (and Cutshall Bog rare community) can be found in the EA's Rare Communities analysis on pages 125 through 128.

**Comment 53:** ...we note that not all silvicultural treatments in a particular location are equally likely to meet restoration goals. We are concerned that there may be a temptation to choose more intensive harvest methods for commercial reasons or to favor game wildlife at sites where less intensive harvests would be more effective for ecological restoration purposes ... The EA should discuss alternatives in a way that allows consideration of these sorts of considerations and facilitates an informed choice.

**Response:** The silviculture treatment(s) for each stand are designed to meet various resource needs, including but not limited to creating early-successional habitat for wildlife (game and nongame), for forest health considerations, to improve age class diversity, and, where needed, for restoration purposes. The treatment method(s) selected for each stand is determined by its current condition(s), the resource need(s), harvest operability, etc, in conjunction with the requirements found in the Forest Plan.

**Comment 54:** ...identifying restoration goals and measureable objectives, comparing alternative restoration treatments, and monitoring restoration outcomes are interdependent requirements. If the goals are not specified, there is nothing to monitor. The inverse is also true: Because monitoring is *essential* to restoration, the EA *must* specify which objectives will be measured [emphasis added by the commenter] ... the EA should be supplemented to at least explain the specific restoration goals and *measureable objectives* [emphasis added by the commenter] it is pursuing and to lay out the basic plan for monitoring the extent to which they are achieved.

**Response:** Thank you for your comment.

**Comment 55:** ...we expect that the final EA and decision notice for the project will contain specific monitoring and adaptive management commitments. An EA must consider the degree to which the effects of a proposed action are uncertain. 40 C.F.R. §§ 1508.9; 1508.27. If the Forest Service will rely on monitoring and adaptive management to mitigate uncertainty and justify a finding of no significant impact, then those strategies must be included with the decision.

**Response:** Forest Plan Standards for monitoring (stand exams, regeneration checks, etc.) would be met for this project. The monitoring plan for the Paint Creek Project is still being developed, but will include installing additional Bates plots (10-15 1/10<sup>th</sup>-acre plots per unit) within two prescribed burn units to evaluate fire impacts. Other monitoring techniques have been discussed to evaluate the Paint Creek Project's restoration actions, but the Forest Service and potential partners currently lack the resources (funding and personnel) to implement the techniques. The Forest Service would cooperate with any partners that could provide needed resources.

Chapter 3 (EA, pages 46 through 162) identifies the direct, indirect and cumulative impacts, by resource, of the actions associated with Alternatives A-D. The effects disclosures for each resource described no uncertain or significant (however, see Climate Change, pages 156 - 158) effects to the environment in the Paint Creek Project area.

**Comment 56:** Bellcow (Stands 216-2 and 29) – This site should be reconsidered in light of the Committee's recommendations and supporting data. A shelterwood without follow-up prescribed fire is unlikely to improve species composition. It is more likely to result in a white pine dominated stand, as in Stand 216-38.

**Response:** Stands 216-2 and 29 are within the Bellcow Mountain Prescribed Burn block. The burn was conducted in April 2014.

**Comment 57:** Hurricane Gap (Stand 215-47) – This site, within the AT Corridor, is inappropriate for commercial vegetation management. The Forest Plan standard [for Management Prescription 4.A] prohibits vegetation management except in limited circumstances, none of which would be met by a commercial thinning in Stand 215-47 ... a noncommercial treatment would be a feasible and prudent means of meeting the restoration goal without requiring hauling and skidding within the AT corridor.

**Response:** Per the Cherokee National Forest Revised Land and Resource Management Plan (Forest Plan) regarding management within Prescription 4.A:

- “Low intensity vegetation management is appropriate to maintain long term goals and stewardship objectives of the [Appalachian Trail] prescription area.” (Forest Plan, p. 95)
- “Activities are planned and carried out in cooperation with the appropriate [Appalachian Trail] management partner(s).” (Forest Plan, p. 95)

Stands proposed for treatment located within Prescription 4.A will be evaluated on a case by case basis to ensure compliance with Forest Plan direction for the prescription. Stands proposed for treatment outside of the 4.A prescription are currently assigned a Scenic Integrity Objective (SIO) of “Moderate” or would not be visible from the A.T.

The request to treat stand 215-47 through a noncommercial thinning will be considered.

**Comment 58:** Little Paint Creek (Stand 262-14 and 30) – We have no objections to the treatment proposed for this site. We note, however, the Committee recommended a commercial gap harvest and thinning, and the Forest Service proposes a noncommercial thinning. We presume that the treatment is noncommercial because the access for hauling logs is too long for a commercially viable treatment. If so, we suggest that the agency consider decommissioning the road beyond the Little Paint Creek ford. If the road is not needed for commercial access, we do not see the purpose of maintaining it ... Decommissioning would reduce sediment inputs at the ford and begin to restore the remote character of the Little Paint Creek area. It would also reduce the pressure on the Forest’s road maintenance budget.

**Response:** The IDT considered how each authorized road or road segment within the Paint Creek Watershed, including the Little Paint Creek Spur (Forest Service Road 31C), would meet the minimum road system needed, per the direction provided in the Forest Plan and Forest Service policy. The IDT determined that FSR 31C, a seasonally open/closed road, is needed to provide access, currently and in the future, for wildlife, vegetation and recreation resources management, and for wildfire suppression. (See the Paint Creek Travel Analysis Report, Table 1, page 13 and Table 4, page 41).

Regarding the proposed noncommercial treatment for Stands 262-14 and 30: Based on the stand exams, it was determined that a commercial thinning of 262-14 and 216-30 was not economically feasible at this time. Additional treatment of the stands will be required, however, and the stands should be commercially viable by the next rotation.

**Comment 59:** As we have explained in connection with other projects and at the scoping stage for this project, we have serious concerns about the adequacy of the Forest’s watershed-level TAPs. Without the information necessary to balance ecological risk against access needs and financial cost, the watershed TAPs will not support the identification of the minimum road system.

**Response:** Per Forest Plan direction and Forest Service policy all existing Forest Service system roads, temporary roads, and discovered unauthorized roads within the Paint Creek Watershed Assessment area were identified, reviewed, and analyzed during the Travel Analysis Process. Step 4 of the Travel Analysis Process is to “assess the various benefits, problems, and risks of the current road system and whether the objectives of Forest Service policy and forest plans are being met” (see Paint Creek Travel Analysis Report, pages 10-12 and pages 18 - 36).



**Comment 60:** Meadow Ridge (Stands 217-10, 31, and 33) – Similar to [Bellcow] Stand 216-2, mentioned above.

**Response:** These stands are within the Bellcow Mountain Prescribed Burn block. The burn was conducted in April 2014.

**Comment 61:** Rough Branch (Stand 217-4) – [As the area was] planted with white pine, the Committee recommended a gap harvest and thinning along with prescribed fire. As with other sites in this project, the Forest Service proposes to implement a shelterwood without prescribed fire. Again, we doubt this will have any restorative benefit, and we expect that the logging would only lead to further degradation and white pine dominance. It appears that this area is in a burn unit for which the NEPA process has never been completed (the Rough Branch unit). When the EA is supplemented to address the issues explained in these comments, the Forest Service should also take the opportunity to include that burn unit in this NEPA process and evaluate its potential to support the restoration work in this area.

**Response:** The Decision Memo for the Rough Branch Prescribed Burn was signed in February, 2010. The burn was conducted in April 2014.

**Comment 62:** Ricker Mountain (Stands 214-15, 20, and 26) – The Committee recommended thinning to remove uncharacteristic trees, leaving the old pitch pines and oaks, with the result a Montane pine woodland. We are not persuaded that a shelterwood treatment will accomplish this goal. A shelterwood is likely to require the removal of characteristic species and a much lower basal area than the site's reference condition.

**Response:** Standard marking guidelines during pre-sale preparation call for Pitch, Shortleaf, and Table Mountain pine and older-aged oaks to be left unmarked to be part of the residual stand, if possible. Snags would not be marked or felled during sale preparation or logging operations unless they pose a threat to life and/or property.

After further field review the proposed treatment for stand 214-15 for all action alternatives will be changed from a Shelterwood to a Midstory treatment followed by a prescribed burn. This decision was made due to the small amount of operable ground within the stand versus the economics of commercially treating this portion of the stand. The Midstory treatment will target red maple, white pine and other species encroaching under the upland oak - yellow pine forest type.

**Comment 63:** Crop Tree Release Treatments (Various Stands) – It appears that the Forest Service omitted much of the crop tree work from Alternative C because those sites were not specifically identified as having restoration needs. We strongly encourage the Forest Service to include this work in its final decision.

**Response:** The request to include the ‘omitted’ crop tree release treatments in the final decision will be considered, if Alternative C is chosen to be implemented.

**Comment 64:** The additional logging in Alternatives B and D (with the exception of the crop tree release) should not be characterized as “restoration” and should not be included in the final project. These are areas where no restoration need has been identified. In many cases, these larger areas were intentionally *excluded* from Committee recommendations because they are in a characteristic condition and not degraded and therefore have no need for restoration work. Stand 218-10 is perhaps the clearest example: this shelterwood in healthy, mature, characteristic forest has no restoration purpose or benefit ... [and] it should not be included in this restoration-oriented project.

**Response:** Thank you for your comment.

**Comment 65:** ...in connection with impacts related to climate change, we note that the EA repeats a proposition we have seen many times before—namely, that “mature forests sequester carbon at a lower rate than younger forests, and therefore management activities ... that maintain a variety of forest ages may increase the ability of forest tracts to sequester carbon.” EA at 158-59. However, recent research shows that older trees actually sequester more carbon than younger trees. Stephenson, et al., “Rate of tree carbon accumulation increases continuously with tree size” (2014) (enclosed).

**Response:** Thank you for your comment.

**Comment 66:** We recognize that, with this project, the Forest Service staff [has] worked hard to consider, incorporate, and adapt to the LRI’s new ecological restoration-oriented approach. Aside from the few substantive concerns above, we think Alternative C can ultimately serve as the basis for a model ecological restoration project that can accomplish good work in its own right and can serve as an example to expedite future similar management on the northern CNF.

**Response:** Thank you for your comment.